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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,930	04/05/2001	Mi-Hyun Son	Q63362	3817

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EXAMINER

HAM, SEUNGSOOK

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/825,930

Applicant(s)

SON ET AL.

Examin r

Seungsook Ham

Art Unit

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-- The MAILING DATE of this communicati n appears on the c ver sheet with the corresp ndence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rousseau (FR '216) in view of Hirai (JP '903).

Rousseau (figs. 1-6) discloses a radio-filter comprising: input and output terminals 9, 10, a transmission line filter having at least one pair of transmission lines 3-8, each of the transmission lines having a via-hole located at each of its respective ends 13-24 (see also fig. 5), a ground layer 32 connected to the transmission lines through via-holes; and a capacitor compensator 33 of lumped element connected through via-

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holes located at second ends of the transmission lines to connected the transmission lines and a ground layer (see fig. 5). It should be noted that Rousseau (fig. 5) also shows the capacitor compensator 27 connected to a closed loop stripline (the capacitor 27 is connected to the ground 32 through an electrode pad conductor directly below the capacitor 27, not numbered) connected to a via-hole 21 (see also equivalent circuit shown in fig. 5, element Co).

Rousseau is applied as above. Rousseau (see figs. 1 and 5) also shows a capacitor compensator formed of a closed loop stripline containing a via-hole connected with one of the via-holes of the striplines of the strip line filter. Rousseau does not show the top ground layer having second input and output terminal formed of closed loop striplines containing via-holes connected respectively with the via-holes of the first input and output terminals. However, such tri-plate stripline structure is well known in the art.

Hirai (figs. 1-3 and 12) discloses a tri-plate stripline filter having input and output terminals formed of a closed loop stripline 28 connected to the stripline filter by via-holes. Therefore, it would have been obvious to one of ordinary skill in the art to provide second input and output terminals on the top ground layer and coupled to the first input and output terminals through via-holes in the device of Rousseau since such design technique is well known and also provide a high degree of designing freedom as taught by Hirai.

Response to Arguments

Applicant's arguments filed on 8/26/02 have been fully considered but they are not persuasive.

In response to the applicant's argument that Rousseau does not show the capacitor compensator is connected through a closed loop stripline and a via-hole (see Remarks, page 7, first paragraph), the examiner disagrees.

It should be noted that applicant's disclosure merely states that 324a, 342b, 364a, 346b are closed loop striplines.

Rousseau (fig. 5) clearly shows the capacitor compensator 27 being connected to a via-hole 21 through an electrode conductor (not numbered) which disposed directly under the capacitor compensator 27. Figures 1 and 3 show the capacitor compensator 25 connected to the electrode conductor that is surrounded a via-hole. It should be noted that the electrode conductor that surrounds the via hole meets the term, "a closed loop stripline" in claim 4 since the applicant failed to point out why the electrode conductor shown in Rousseau is not a "closed loop stripline".

Moreover, the applicant stated that he cannot find disclosure that the input and output terminals are formed of a closed loop stripline in Hirai reference (see Remarks, page 7, last paragraph). Hirai (see figs. 2 and 3) clearly shows the input/output terminals 28 (see equivalent circuit, figure 8 or 10, shows the input terminal 28, see also abstract, "an input/output terminal 28") formed by an electrode surrounds the via-hole 34 (see fig. 2). The electrodes that surround the via-hole 34 has a "closed loop stripline" structure since these electrodes are surrounded by a ground conductor and isolated from the ground conductor by a gap which is identical to the applicant's claimed invention (see also applicant's figure 3). Note that the claim 4 does not recite that "a

closed loop stripline" that connects the capacitor compensator is disposed on a top ground layer.

It should be noted that the applicant failed to explain why the electrode that surrounds a via-hole in Rousseau or Hirai is not a "closed loop stripline".

In response to applicant's arguments against the references individually (i.e., Hirai shows a coupling capacity is built between the input and output terminals of the filter and the resonance electrode which is differ from the applicant's claimed invention), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It should be noted that Hirai reference is used as a secondary reference showing input/output terminals formed of closed loop striplines on a top ground layer. Therefore, it is the examiner's position that it would have been obvious to one of ordinary skill in the art to provide second input and output terminals on the top ground layer and coupled to the first input and output terminals through via-holes in the device of Rousseau since such design technique is well known and also provide a high degree of designing freedom as taught by Hirai (see 35 USC 103 rejection above). The applicant failed to show why one skilled in the art would not use the teaching of Hirai in the device of Rousseau.

Thus, the rejection is still stand.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (703) 308-4090. The examiner can normally be reached on Monday - Thursday from 8:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703)308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

A handwritten signature in black ink, appearing to be 'Seungsook Ham', written in a cursive style.

Seungsook Ham
Primary Examiner
Art Unit 2817

sh
October 3, 2002